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| FORM PTO-1390 (REV 01-2003) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | | ATTORNEY'S DOCKET NUMBER: 095309.55774US <small>U.S. APPLICATION NO. (if known, see 37 CFR 1.5)</small> <div style="font-size: 24pt; font-weight: bold; text-align: center;">10/520172</div> |
| TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371 | | |
| INTERNATIONAL APPLICATION NO. PCT/EP2003/005964 | INTERNATIONAL FILING DATE 06 June 2003 | PRIORITY DATE CLAIMED 04 July 2002 |
| TITLE OF INVENTION Piezoelectric Actuator for Media Flowing Therearound and Use of a Corresponding Piezoelectric Actuator | | |
| APPLICANT(S) FOR DO/EO/US Tobias FLAEMIG-VETTER, Heinz OEING and Gregor RENNER | | |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information: | | |
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371 3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f). The submission must include items (5), (6), (9) and (21) indicated below. 4. <input checked="" type="checkbox"/> The US has been elected (Article 31). 5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)). <ol style="list-style-type: none"> a. <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input checked="" type="checkbox"/> has been transmitted by the International Bureau c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US) 6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). <ol style="list-style-type: none"> a. <input checked="" type="checkbox"/> is attached herewith. b. <input type="checkbox"/> has been previously submitted under 35 USC 154(d)(4). 7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> have been transmitted by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input checked="" type="checkbox"/> have not been made and will not be made. 8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)) 10. <input type="checkbox"/> An English translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). <p>Item 11. to 20. below concern other document(s) or information included:</p> <ol style="list-style-type: none"> 11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <input checked="" type="checkbox"/> A preliminary amendment. 14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76. 15. <input checked="" type="checkbox"/> A substitute specification. 16. <input type="checkbox"/> A power of attorney and/or change of address letter. 17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 – 1.825. 18. <input type="checkbox"/> A second copy of the published international application under 35 USC 154(d)(4). 19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 USC 154(d)(4) 20. <input checked="" type="checkbox"/> Other items or information: <ol style="list-style-type: none"> a. Four (4) sheets of formal drawings (Figs. 1-7) b. Copy of Form PCT/IB/308 c. | | |

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| U.S. APPLICATION NO. (if known, see 37 CFR 1.5) | | INTERNATIONAL APPLICATION NO. | | ATTORNEY'S DOCKET NUMBER | |
| 10/520172 | | PCT/EP2003/005964 | | 095309.55774US | |
| 21. The following fees are submitted: | | | | CALCULATIONS | PTO USE ONLY |
| | | | | \$ | |
| <input checked="" type="checkbox"/> a) Basic national fee..... \$300.00 | | | | | |
| <input checked="" type="checkbox"/> b) Examination fee..... \$200.00 | | | | | |
| <input checked="" type="checkbox"/> c) Search fee..... \$500.00 | | | | | |
| TOTAL OF ABOVE CALCULATIONS = \$1000.00 | | | | \$1,000 | |
| Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof. | | | | | |
| Total Sheets | Extra sheets | Number of each add'l 50 or fraction thereof (round up to a whole number) | RATE | | |
| - 100 = | /50 = | | x \$250.00 | \$ | |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)). | | | | \$ 130 | |
| Claims | Number Filed | Number Extra | Rate | | |
| Total Claims | 18 - 20 = | 0 | X \$50.00 | \$ | |
| Independent Claims | 1 - 3 = | 0 | X \$200.00 | \$ | |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable) | | | + \$360.00 | \$ | |
| TOTAL OF ABOVE CALCULATIONS = | | | | \$1,130 | |
| <input type="checkbox"/> Applicant claims Small Entity Status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2. | | | | \$ | |
| SUBTOTAL = | | | | \$1,130 | |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)). | | | | \$ | |
| TOTAL NATIONAL FEE = | | | | \$1,130 | |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property + | | | | \$ | |
| TOTAL FEE ENCLOSED = | | | | \$1,130 | |
| | | | | Amount to be refunded | \$ |
| | | | | Charged | \$ |
| a. <input checked="" type="checkbox"/> A check in the amount of \$1,130 for the filing fee (\$1,000) and the surcharge fee (\$130) is enclosed | | | | | |
| b. <input type="checkbox"/> Please charge my Deposit Account No. <u>05-1323</u> (Attorney Docket No. <u>==</u>) in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed. | | | | | |
| c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees, which may be required, or credit any overpayment to Deposit Account No. <u>05-1323</u> . (ATTORNEY DOCKET NO. <u>095309.55774US</u>). A duplicate copy of this sheet is enclosed. | | | | | |
| d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. | | | | | |
| NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status. | | | | | |
| SEND ALL CORRESPONDENCE TO: | | | | | |
| Crowell & Moring, LLP | | | | SIGNATURE | |
| Intellectual Property Group | | | | Vincent J. Sunderdick | |
| P.O. Box 14300 | | | | NAME | |
| Washington, D.C. 20044-4300 | | | | 29,004 | |
| Tel. No. (202) 624-2500 | | | | REGISTRATION NUMBER | |
| Fax No. (202) 628-8844 | | | | January 4, 2005 | |
| | | | | DATE | |

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : To Be Assigned Confirmation No. : TBA
First Named Inventor : Tobias FLAEMIG-VETTER
Filed : Concurrently Herewith
TC/A.U. : To Be Assigned
Examiner : To Be Assigned
Docket No. : 095309.55774US
Customer No. : 23911
Title : Piezoelectric Actuator for Media Flowing Therearound
: and Use of a Corresponding Piezoelectric Actuator

SUBMISSION OF SUBSTITUTE SPECIFICATION

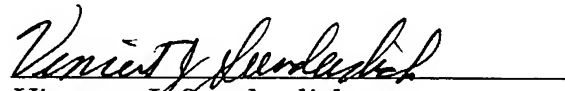
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is a Substitute Specification and a marked-up copy of the original specification. I certify that said substitute specification contains no new matter and includes the changes indicated in the marked-up copy of the original specification.

Respectfully submitted,

January 4, 2005


Vincent J. Sunderdick
Registration No. 29,004

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